

Abstract of the Disclosure

A screw compressor includes a compressor main body, a male rotor having a screw-like male tooth shape and a female rotor having a screw-like female tooth shape meshing with the screw-like male tooth shape or the male rotor. The male and female rotors are provided within the compressor main body. A motor casing is operably connected to the compressor main body, and a high speed electric motor provided within the motor casing. The motor includes a motor rotor, a motor stator and a motor shaft for driving at least one of the male and female rotors. A speed ratio of the motor shaft and the at least one of the male and female rotors driven by the motor shaft is in a range of 2:1 to 1:2.